

REMARKS

The foregoing amendments are responsive to the Office Action mailed on March 31, 2006. Claims 1, 26-38, 40-41, and 45 are pending in this application. By the foregoing amendments claims 1, 26, 32 and 45 have been amended. Support for the amendment is found in Applicant's specification and original claims. Thus, claims 1, 26-38, 40-41, and 45 are presented for examination.

Accompanying this communication is a Petition to Extend the prosecution for three months to September 30, 2006.

Discussion of the Office Action

In the Office Action of March 30, 2006, the Examiner newly rejected claims 1 and 26 under 35 U.S.C. §102(b), and she has newly rejected claims 1, 26-41, and 45 under 35 U.S.C. §103.

Discussion of Rejection of Claims 1 and 26 under 35 U.S.C. §102(b)

Claims 1 and 26 stand rejected under 35 USC 102(b) as being anticipated each by Mueller et al. , i.e., US Patent 3,730,789, and Barnhard, IV et al. , i.e. US Patent 4,058,420. However, in light of Applicants' amendments to claims 1 and 26, the rejection should be withdrawn. Both the Barnhard, IV et al. and Meuller et al. references relate to processes that do not concern themselves with removing the liquid phase from their products and, accordingly, such processes produce compositions that contain significant amounts of liquids (water). Such references are not related to the preparation of solid energetic compositions. See Barnhard, IV et al., for instance, in the title, in the examples in column 3, in example IV in column 5, and Table 1 in column 6. See Mueller et al., for instance, in column 2, lines 9-17, in examples 1 and 2 in column 3, and in column 4, claim 1. The anticipation rejections should be withdrawn.

Discussion of Rejection of Claims 1 and 26-45 under 35 U.S.C. §103

Claims 1, 26-41 and 45 stand rejected under 35 USC 103 (a) as being unpatentable over Attia, i.e., US Patent 6,080,281, in view of Barnhard, IV et al., i.e. US Patent 4,058,420, and the article from Science and Technology Review (herein "STR"). However, in light of Applicants' amendments, the rejection should be withdrawn.

The Attia reference does not disclose or suggest a process for including energetic materials in a composition such as aerogel. Attia discloses the sol-gel preparation of aerogel materials (containing CaO and MgO) which are capable of removing contaminants from air streams, capable of photocatalytic uses (TiO₂ or ZnO), and as products for fertilizers or building materials. See Attia, for instance, at column 7, lines 41 to end, and column 9, lines 57-60. Furthermore, although the STR reference teaches the sol-gel process can be less expensive, nowhere in the STR reference is it disclosed or suggested to incorporate energetic materials into aerogels. On page 23 of the STR article, the authors mention a wide variety of uses of such aerogels, but do not disclose or suggest the inclusion of energetic materials. Such a combination of references is founded on hindsight reasoning.

Moreover, the examiner combines the Barnhard IV, et al. reference with Attia and STR to show the combination of gels with energetic materials. However, as noted above in the 35 USC 102 discussion, such energetic compositions of Barnhard IV, et al. relate to a process for preparing explosive materials that contain significant liquids, i.e., related to the preparation of non-solid compositions. One of ordinary skill in the art would not mix the teachings for preparing liquid explosives with teachings for preparing solid materials. Barnhard IV, et al. should not be combined with the other cited references.

Accordingly, Applicants submit that no *prima facie* case of obviousness can be established in view of the cited references. There is (1) no disclosed nexus between the Attia reference and energetic materials, (2) no disclosed nexus between the aerogels

of the STR article and energetic materials, and (3) no motivation for one of ordinary skill in the art to combine teachings of the preparation of liquid explosives (Barnhard IV, et al.) and the preparation of solid materials of the other cited references. The obviousness rejection should be withdrawn.

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Moreover, the examiner combines the Mueller et al. reference with Attia and STR to show the combination of gels with energetic materials. However, as noted above in the 35 USC 102 discussion, such energetic compositions of Mueller et al. relate to a process for preparing energetic materials that contain significant liquids, i.e., related to the preparation of non-solid compositions. One of ordinary skill in the art would not mix the teachings for preparing liquid explosives with teachings for

preparing solid materials. Mueller et al. should not be combined with the other cited references.

Accordingly, Applicants submit that no *prima facie* case of obviousness can be established in view of the cited references. There is (1) no disclosed nexus between the Attia reference and energetic materials, (2) no disclosed nexus between the aerogels of the STR article and energetic materials, and (3) no motivation for one of ordinary skill in the art to combine teachings of the preparation of liquid energetic materials (Mueller et al.) and the preparation of the solid materials of the other cited references. The obviousness rejection should be withdrawn.

Discussion of Rejection of Claims 1 and 26-45 under 35 U.S.C. §103

Claims 1, 26-41 and 45 stand rejected under 35 USC 103 (a) as being unpatentable over Katsula et al, i.e., US Patent 4,317,691, in view of Mueller et al. , i.e., US Patent 3,730,789, and the article from Science and Technology Review (STR). However, in light of Applicants' amendments, the rejection should be withdrawn.

The Katsula et al. reference does not disclose or suggest a process for including energetic materials in a solid composition. Katsula et al. discloses the preparation of liquid explosives by adding gelled compositions to liquid explosive compositions. See Katsula et al, for instance, in the title, at column 2, lines 54-56, column 3, lines 36-41, particularly line 41, and the claims. Furthermore, although the STR reference teaches the sol-gel process can be less expensive, nowhere in the STR reference is it disclosed or suggested to incorporate energetic materials into aerogels. On page 23 of the STR article, the authors mention a wide variety of uses of such aerogels, but do not disclose or suggest the inclusion of energetic materials. Such a combination of references is founded on hindsight reasoning.

Moreover, the examiner combines the Mueller et al. reference with Katsula et al. and STR to show the combination of gels with energetic materials. However, as

noted above in the 35 USC 102 discussion, such energetic compositions of Mueller et al. relate to a process for preparing energetic materials that contain significant liquids, i.e., related to the preparation of non-solid compositions. One of ordinary skill in the art would not combine the teachings for preparing liquid explosives with teachings for preparing liquid materials in order to render obvious Applicants' process for preparing a solid energetic material. Mueller et al. should not be combined with the other cited references to obviate solid energetic material preparation.

Accordingly, Applicants submit that no *prima facie* case of obviousness can be established in view of the cited references. There is (1) no disclosed nexus between the aerogels of the STR article and the liquid energetic materials of the other cited references, and (2) no motivation for one of ordinary skill in the art to combine teachings of the preparation of liquid energetic materials (Mueller et al.) and the preparation of liquid materials of the Katsula et al. reference to render obvious the preparation of solid energetic materials of the claimed invention. The obviousness rejection should be withdrawn.

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On page 23 of the STR article, the authors mention a wide variety of uses of such aerogels, but do not disclose or suggest the inclusion of energetic materials. Such a combination of references is founded on hindsight reasoning.

Moreover, the examiner combines the Barnhard, et al. reference with Katsula et al. and STR to show the combination of gels with energetic materials. However, as noted above in the 35 USC 102 discussion, such energetic compositions of Barnhard, et al. relate to a process for preparing energetic materials that contain significant liquids, i.e., related to the preparation of non-solid compositions. One of ordinary skill in the art would not combine the teachings for preparing liquid explosives with teachings for preparing liquid materials in order to render obvious Applicants' process for preparing a solid energetic material. Barnhard, et al. should not be combined with the other cited references to obviate solid energetic material preparation.

Accordingly, Applicants submit that no *prima facie* case of obviousness can be established in view of the cited references. There is (1) no disclosed nexus between the aerogels of the STR article and the preparation of liquid energetic materials of the other cited references, and (2) no motivation for one of ordinary skill in the art to combine teachings of the preparation of liquid energetic materials (Barnhard, et al.) and the preparation of liquid materials of the Katsula et al. reference to render obvious the preparation of the solid energetic materials of the claimed invention. The obviousness rejection should be withdrawn.

Summary

Having amended the claims, as discussed above, Applicants respectfully submit that claims 1, 26-38, 40-41 and 45 are in condition for allowance, and Applicants respectfully request allowance of such claims .

In the event that the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, he is respectfully requested to initiate the same with the undersigned at (925) 422-7820.

Respectfully submitted,



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Dated: September 29, 2006